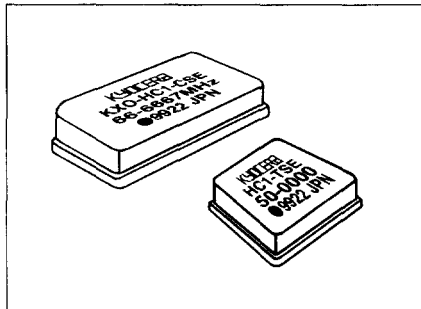


Crystal Clock Oscillators - Leaded

KXO-HC/KHO-HC Series: HCMOS Drive -
TTL or CMOS Compatible

AVX

f_0 : 1 to 72MHz



HOW TO ORDER

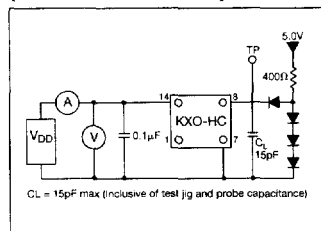
KXO-HC 1-TS E - 32.0000M T

- ① ②③ ④ ⑤ ⑥
- ① **Type:** KXO = 14 pin DIP; KHO = 8 pin DIP
 - ② **Frequency Precision:** S = ± 25 ppm (special)
0 = ± 50 ppm
1 = ± 100 ppm
 - ③ **Output Level/Duty Cycle:** TS = TTL compatible/45 to 55%
CS = CMOS compatible/45 to 55%
 - ④ **Enable/Disable Function:** Blank \square = without function
E = with function
 - ⑤ **Frequency**
 - ⑥ **Standard Packaging:** T = tube (KXO-HC = 25 pcs.)
(KHO-HC = 40 pcs.)

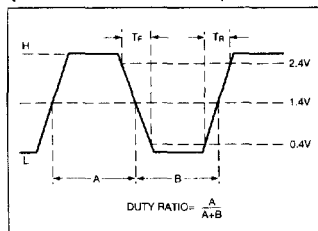
Specifications: TTL Compatible

CLASSIFICATION	CODE	RATING		UNIT	REMARKS
Output Frequency	f_{OUT}	1-50	50.1-72	MHz	—
Frequency Precision (Inclusive of Temp. Voltage variation)	$\Delta f/f$	0 : ± 50 1 : ± 100		ppm ppm	$T_a = 0 \sim +70^\circ\text{C}$
Aging Rate	$\Delta f/f$	± 5		ppm/year	—
Operating Temp.	T_{OPR}	0-+70		$^\circ\text{C}$	—
Storage Temp.	T_{STR}	-55-+125		$^\circ\text{C}$	—
Supply Voltage	V_{CC}	5 \pm 0.5	5 \pm 0.25	V	—
Supply Current	I_{CC}	50 max.	70 max.	mA	$CL = 15\text{pF} \cdot 10\text{TTL Load}, T_a = 25^\circ\text{C}$
Output	Duty Ratio	S_y	45-55	%	1.4V DC Level
	Output 0 Level	V_{OL}	0.4 max.	V	$I_{OL} = 16\text{mA}$
	Output 1 Level	V_{OH}	2.4 min.	V	$I_{OH} = -1\text{mA}$
	Rise/Fall Time	T_r, T_f	5.0 max.	3.5 max.	nsec
Time to Enable/Disable	—	100 max.		nsec	—
Input Current	I_{IH}	10 max.		μA	$V_{CC} = 5.5\text{V}$
	I_{IL}	-150 max.		μA	$V_{CC} = 5.5\text{V}$
Input Voltage	V_{IH}	2.2 max.		V	—
	V_{IL}	0.8 max.		V	—
Fan Out	—	10		TTL	—
Load Capacitance	C_L	15 max.		pF	—

Test Circuit (KXO-HC-T/KHO-HC-T)



Shape of Output Wave (KXO-HC-T/KHO-HC-T)



Additional information on this product is available from AVX's catalog or AVX's FAX Service.
Call 1-800-879-1613 and request document #141. Visit our website <http://www.avxcorp.com>

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Crystal Clock Oscillators - Leaded

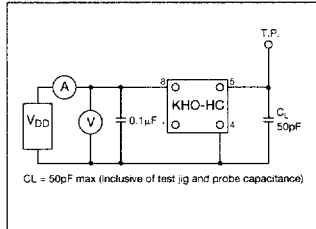
KXO-HC/KHO-HC Series HCMOS Drive - TTL or CMOS Compatible (Continued)

AVX
 f_o : 1 to 72MHz

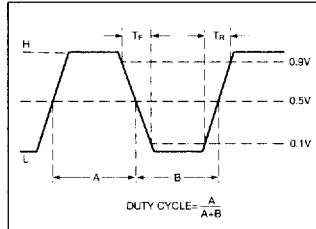
Specifications: CMOS Compatible

CLASSIFICATION	CODE	RATING		UNIT	REMARKS
Output Frequency	f_{OUT}	1-50	50.1-72	MHz	—
Frequency Precision (Inclusive of Temp. Voltage variation)	$\Delta f/f$	0 : ± 50 1 : ± 100		ppm ppm	$T_a = 0 \sim +70^\circ\text{C}$
Aging Rate	$\Delta f/f$	± 5		ppm/year	—
Operating Temp.	T_{OPR}	0 ~ +70		$^\circ\text{C}$	—
Storage Temp.	T_{STR}	-55 ~ +125		$^\circ\text{C}$	—
Supply Voltage	V_{CC}	5 \pm 0.5	5 \pm 0.25	V	—
Supply Current	I_{CC}	50 max.	80 max.	mA	$C_L = 50\text{pF}$, $T_a = 25^\circ\text{C}$
Output	Duty Ratio	S_y	45-55	%	0.5 V_{CC} DC Level
	Output 0 Level	V_{OL}	0.1 V_{CC} max.	V	$I_{OL} = 16\text{mA}$
	Output 1 Level	V_{OH}	0.9 V_{CC} min.	V	$I_{OH} = 1\text{mA}$
	Rise/Fall Time	T_R, T_F	10 max.	6 max.	nsec
Time to Enable/Disable	—	100 max.		nsec	—
Input Current	I_{IH}	10 max.		μA	$V_{CC} = 5.5\text{V}$
	I_{IL}	-150 max.		μA	$V_{CC} = 5.5\text{V}$
Input Voltage	V_{IH}	2.2 max.		V	—
	V_{IL}	0.8 max.		V	—
Load Capacitance	C_L	50 max.		pF	—

Test Circuit (KXO-HC-C/KHO-HC-C)

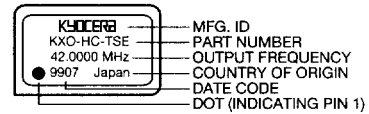


Shape of Output Wave (KXO-HC-C/KHO-HC-C)

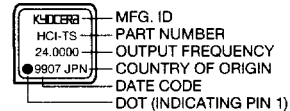


Markings

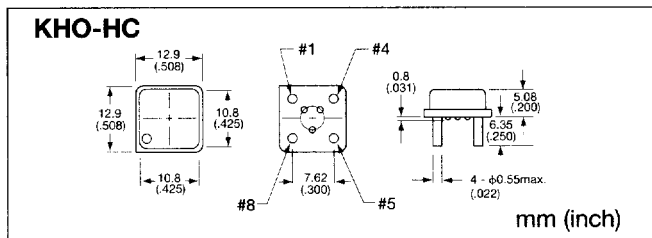
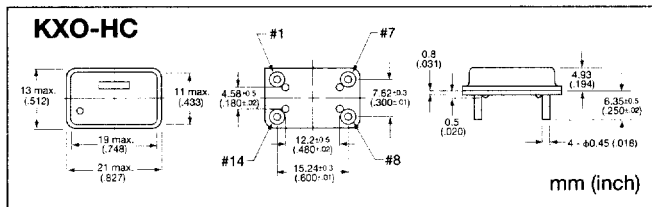
KXO-HC



KHO-HC



Dimensions and PIN Identification



Pin Connection

KXO	KHO	
1	1	N.C. or Control
7	4	Case/GND
8	5	Output
14	8	+5.0V D.C.

Enable / Disable Function Chart

Pin 1	Pin 8
High or Open	Oscillation
Low	High Impedance

Additional information on this product is available from AVX's catalog or AVX's FAX Service. Call 1-800-879-1613 and request document #142. Visit our website <http://www.avxcorp.com>

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